



2024 MoDOT TSMO Update

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Missouri DOT

TSMO Structure



Existing MoDOT Teams and Groups

New Teams

TIM Coordinators
Group

TIM Statewide
Subcommittee

Traffic Management
Centers Group

Traffic Signal QC

Work Zone QC

**Advancing
Technology (AT)**

**TSMO Education
and Outreach**

Other Teams

As Needed

**TSMO
Steering
Committee**

Central Office
Coordinators

Team Liaisons

**TSMO Central
Office
Coordinators**

**TSMO
Board of
Directors**

Senior Leadership
Team Members

Current Objectives



- Advance work zone safety
- Statewide standards and specifications for ITS
- Advance the use and benefits of data and analytics
- Develop a library of technical resources

Current Objectives



- Continue to prepare for and advance CAV in Missouri
- Education and outreach of TSMO benefits
- Develop additional regional TIM coalitions
- Develop a library of technical resources

TSMO Outreach



https://www.modot.org

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Missouri Department of Transportation

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Utility Resources

Value Engineering

out

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Doing Business With MoDOT

Standards & Specifications

Surplus Equipment and

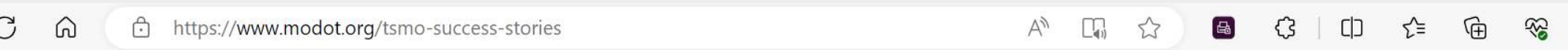
Auctions

TSMO Strategies

Utility Resources

Value Engineering

TSMO Examples



TSMO Success Stories



Innovative Interchange Design

An innovative design can go a long way when it comes to improving traffic flow and increasing safety. In this video, St. Louis District Transportation Project Manager Lisa Kuntz, Transportation Project Designer Dan Savageau and Traffic Operations Engineer Eddie Watkins discuss how innovative roadway design and construction are helping to alleviate traffic congestion on the Route 141/Route 364 interchange and how these improvements are leading to safer travel in the area.

Smart Work Zones

Smart work zones keep traffic moving as safely and efficiently as possible. Traffic Management and Operations Engineer Dan Smith discusses smart work zones - what they are and why they are used. Improve I-70 Program Director Eric Kopinski details how smart work zones will be used in the first stretch of the Improve I-70 project from Columbia to Kingdom City.

Work Zone Data Exchange



Work Zone Data Exchange (WZDx) Feed Registry

Roadways And Bridges




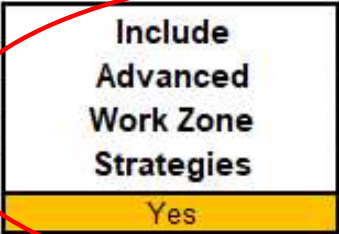

state	issuingOrganization	feedName	url
iowa	iowa DOT	idot	https://iowa-atms.cloud-q-free.com/ap...
nps	National Park Service	nps	https://www.nps.gov/external-resource...
florida	Florida DOT	flidot	https://us-datacloud.one.network/fdot/...
minnesota	Minnesota DOT	mndot	https://mn.carsprogram.org/carsapi_v...
texas	Texas DOT	txdot_v4	http://txdot-its-c2c.txdot.gov/WZDx/4.1
california	Metropolitan Transportation Commis...	mtc	https://api.511.org/traffic/wzdx?api_ke...
maryland	Maryland DOT	mdot	https://filter.ritis.org/wzdx_v4.1/mdot...
arizona	Maricopa County DOT	mcidot	https://arisapp01.mcidot-its.com/wzdx...
missouri	Missouri DOT	modot	https://traveler.modot.org/timconfig/fe...



TSMO Resources

Work Zone Impact Analysis Spreadsheet

616.13 Work Zone Capacity, Queue and Travel Delay

	MoDOT WORK ZONE IMPACT ANALYSIS SPREADSHEET	
Revised: 2/25/22		
Remember to ENABLE CONTENT so the macros inside the excel sheet can run.		
Select Volume Input Method using the BUTTONS below.		
		
		
Use the TABS to navigate through the spreadsheet after selecting Input Method.		
Enter information into the HIGHLIGHTED cells.		
BLUE	cells indicate information needed regarding the Base Conditions	
ORANGE	cells indicate information needed regarding the Work Zone	
YELLOW	cells are optional inputs. Leave these BLANK if you want to use the spreadsheets defaults.	
GREEN	cells are based on imported TSHV data	



TSMO Resources

Work Zone Impact Analysis Spreadsheet

616.13 Work Zone Capacity, Queue and Travel Delay

Advanced Work Zone Strategy	Score*	Rank	Recommendation	Budgetary Estimate
1. Construction Vehicle Warning System	80	3	Strongly Recommended	\$40,000
2. Dynamic Late Merge (Zipper Merge) System	72	4	Strongly Recommended	\$50,000
3. Queue Warning System	48	5	Should be Considered	\$10,000
4. Road Closure	0	-	Not Applicable	\$0
5. Speed Warning System	88	2	Strongly Recommended	\$43,000
6. Temporary Rumble Strips	100	1	Strongly Recommended	\$2,000
7. Temporary Traffic Incident Management and ITS System	0	-	Not Applicable	\$0
8. Travel Time Advisory System	29	6	Not Recommended	\$48,000
9. Travel Time Advisory System with Alternative Route	0	-	Not Applicable	\$0

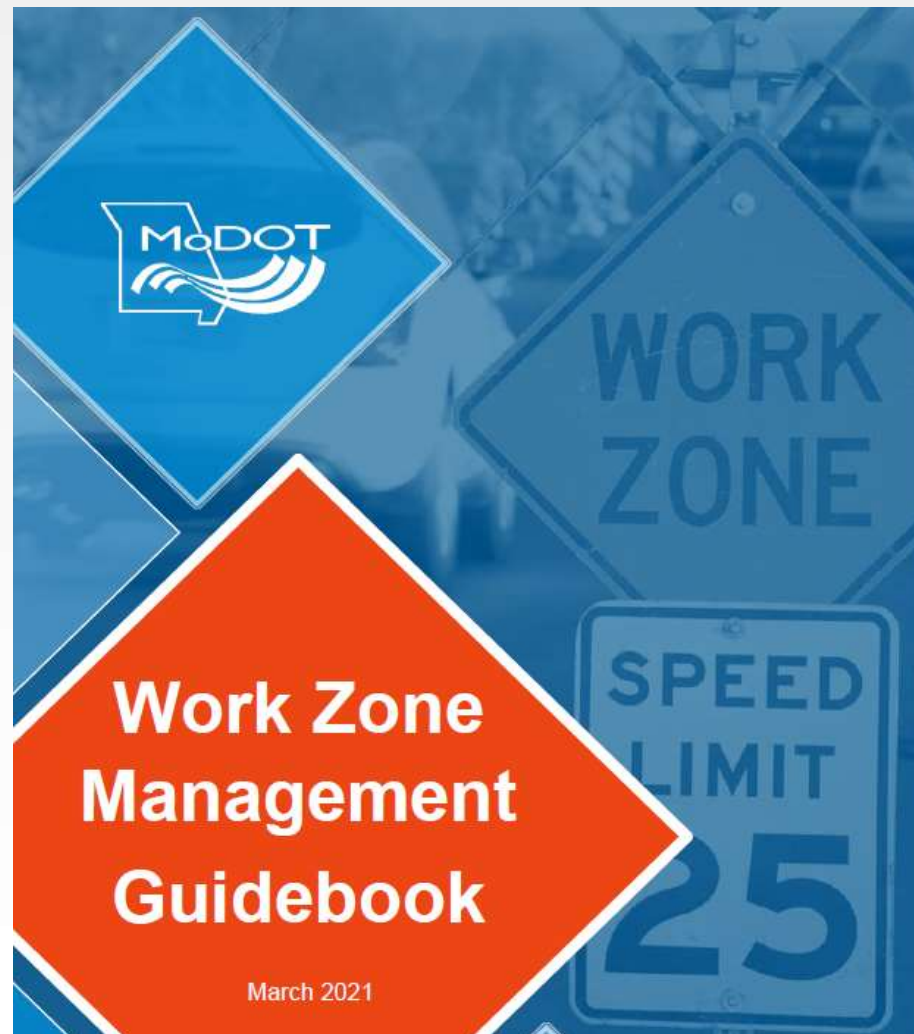
Contract Time Acceleration Strategy	Score**	Rank	Recommendation
A+B Bidding	29	4	Not Recommended
Liquidated Damages Specified	85	1	Strongly Recommended
Liquidated Savings Specified	67	3	Should be Considered
Liquidated Savings / Liquidated Damages Specified	75	2	Strongly Recommended



TSMO Resources

Work Zone Management Guidebook

EPG 909: Transportation Systems Management and Operations (TSMO)



TSMO Resources

Work Zone Management Guidebook

EPG 909: Transportation Systems Management and Operations (TSMO)



	Construction Vehicle Warning System	Revision 09/30/2020	Page 1
<p>Description</p> <p>One of the crucial aspects of the establishment and maintenance of a work zone is safe access and egress points for construction vehicles. These points are key determinants when it comes to ensuring the safety of both the traveling public and construction workers on a project. The safety challenges include travelers following construction vehicles which are slower than usual traffic, acceleration, and deceleration of work vehicles while entering or exiting work zones, the proximity of work vehicles to passing motorists.</p> <p>The use of ITS in work zones provides a variety of innovative ways where technologies can be exploited for the improvement of work vehicles access to and egress from work zones. The usage of detectors and CMS helps in notifying the motorists when a construction vehicle is planning to enter or exit from work zones. This display of messages can prepare travelers for a slowdown or potential merging conflicts due to construction vehicles. These warnings also reduce the frequency of incidents where motorists following work vehicles.</p>			
<p>Applications</p> <ul style="list-style-type: none"> At least one construction vehicle access point. Work zones where a truck acceleration/merge lane is not provided. Work zone speed limit is greater than 25 mph Traffic Volumes \geq 1500 vehicles per lane per hour ADT is above the level where a truck can easily find a gap in traffic to accelerate within the traffic lane without causing traffic to have to adjust speed or change lanes. 		<p>Benefits</p> <ul style="list-style-type: none"> The system should alert drivers of a slowly accelerating construction vehicle crossing into the traffic lane. The system should provide drivers sufficient time to react appropriately, such as slowing down. 	
<p>Costs</p> <ul style="list-style-type: none"> Sensors and CMS: \$15,000 per access/egress points. (\$13k. High Level MnDOT Cost Estimate.) 		<p>Reference</p> <p>https://www.workzonesafety.org/files/documents/training/courses_programs/rsa_program/RSP_Guidance_Documents_Download/RSP_Access_Egress_Download.pdf</p>	

	Construction Vehicle Warning System	Revision 09/30/2020	Page 2
<p style="text-align: center;">Diagram</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="1150 581 1549 954"> <p>Non-Intrusive Detection placed along the roadway as needed for proper system operations. The detection may include radio control devices operated by the truck drivers.</p> <p style="text-align: center;">TRUCK HAUL ROAD</p> </div> <div data-bbox="1570 581 1990 954"> <p>Non-Intrusive Detection placed along the roadway as needed for proper system operations. The detection may include radio control devices operated by the truck drivers.</p> </div> </div> <p style="text-align: center;">Specific examples of ITS application from the Minnesota DOT.</p> <div data-bbox="1486 987 1906 1425"> <p>Non-Intrusive Detection placed along the roadway as needed for proper system operations. The detection may include radio control devices operated by the truck drivers.</p> </div>			

Contact for Questions



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